

Table S1 - Characteristics and values used for the calculation of temperature, depth, and metabolism rate of the different life stages of the study species. *Estimated from Figueiredo et al. (1995), Massutí et al. (2001), Pirrera et al. (2009).

	Rockfish			Wreckfish			Seabream		
Back-calculation formula	TL=3.56+5.14*OR (Esteves et al. 1997)			TL = 1517 (1 - e ^{-0.013(OR-(-3.126))}) (Sedberry et al. 1999)			TL= 39.4177 *OR ^{1.189} (Krug 1989)		
Weight-length formula	W = 0.0140 * TL ^{3.058} (Rosa et al. 2006)			W = 0.0195 * TL ^{2.96} (Froese & Pauly 2010)			W = 0.0172 * TL ^{3.027} (Rosa et al. 2006)		
Region	Core	Middle	Edge	Core	Middle	Edge	Core	Middle	Edge
n (δ¹³C, δ¹⁸O)	12, 9	12, 9	10, 7	9, 9	8, 8	5, 5	10,10	9, 9	10, 10
mean depth caught (m)	NA	NA	887.5	NA	NA	705.0	NA	NA	440.9
A priori depth (m)	275*	525	575	375	475	625	175	275	425
δ¹⁸O_{water}(SMOW) (‰)	0.67	0.52	0.49	0.61	0.55	0.47	0.74	0.67	0.58
δ¹³C_{Prey} (‰)	-19.0	-19.0	-19.0	-18.6	-18.6	-18.6	-19.1	-19.1	-19.1

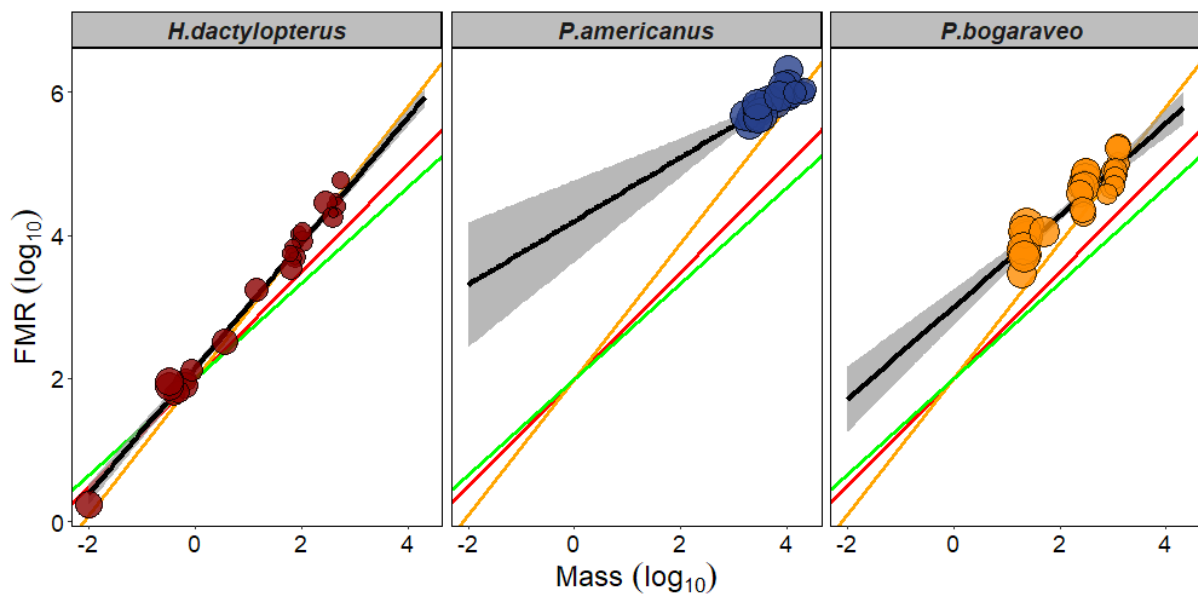


Figure S1 – Mass scaling of field oxygen consumption rates inferred from otolith isotopes with different mass scaling component regression lines. Red lines indicate mass scaling with an exponent of 0.79, orange a mass scaling of 0.95 and green a mass scaling of 0.67, body size is shown by the size of the points.

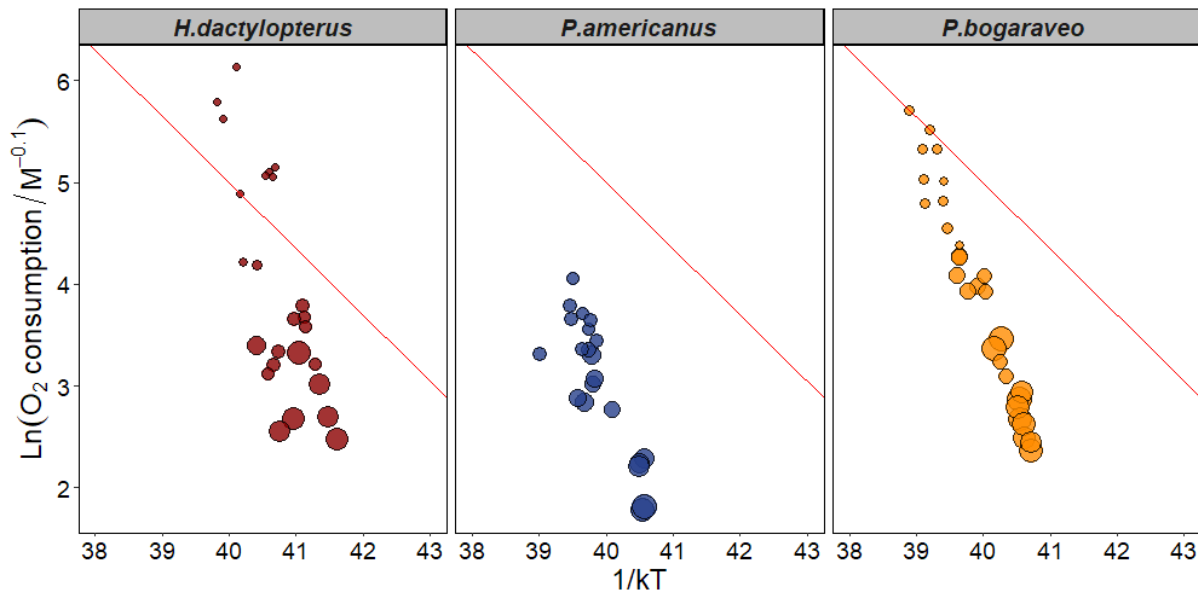


Figure S2 – Arrhenius plot showing thermal sensitivity of FMR values accounting for body size (shown by size of points) using a mass scaling exponent of -0.21. Red lines indicate temperature scaling with a thermal sensitivity of 0.65eV

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